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Atty. Dkt. No. 071949-2404



TECH CENTER 1600/2900

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kenneth F. Buechler, et al.  
Title: HYBRID PHTHALOCYANINE  
DERIVATIVES AND THEIR  
USES  
Appl. No.: 09/776,599  
Filing Date: 02/01/2001  
Examiner: Jon D. Epperson  
Art Unit: 1639

<p><b>CERTIFICATE OF MAILING</b> I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the date below.</p> <p><u>Germaine Sarda</u> (Printed Name)</p> <p><u><i>Germaine Sarda</i></u> (Signature)</p> <p><u>December 2, 2003</u> (Date of Deposit)</p>
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**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Applicant submits herewith a listing of the documents cited by or submitted to the U.S. PTO in parent application Serial Nos. 08/274,534, filed July 12, 1994; 08/409,298, filed 03/23/1995; 08/620,597, filed March 22, 1996 and 09/066,255, filed April 24, 1998. As provided in 37 CFR §1.98(d), copies of the documents are not being provided since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to

antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

### **TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits after the filing of a request for continued examination under §1.114.

### **RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicant respectfully requests that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Respectfully submitted,

Date December 2, 2003

By Barry Wilson

FOLEY & LARDNER

Customer Number: 30542

Telephone: (858) 847-6722

Facsimile: (858) 792-6773

Barry S. Wilson

Attorney for Applicant

Registration No. 39,431

2406



FORM PTO-1449  LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT  (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	071949-2404	09/776,599
	APPLICANT: Buechler et al.	
	FILING DATE:	GROUP:
	02-01-2001	1639

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
	AA	5,624,028	5/6/97	Tai et al.	435	6	11/3/93

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)
	AB	Ben-Hur, E., et al. "Phthalocyanine-Induced Photohemolysis: Structure-Activity Relationship and The Effect of Fluoride," <i>Photochemistry and Photobiology</i> 58: No. 3, 351-355 (1993)
	AC	Kudrevich, et al. "Syntheses of Monosulfonated Phthalocyanines, Benzonaphthoporphyrans and Porphyrins via the Meerwein Reaction," <i>Journal of The Chemical Society: Perkin Transactions I</i> 2767-2774 (1994)
	AD	Margaron, P. et al. "Photodynamic Properties of Naphthosulfobenzoporphyrane Derivatives," <i>Journal of Photochemistry and Photobiology</i> 14:187-199 (1992)
	AE	Margaron, P. et al. "Chromatographic Analysis of Asymmetric Sulphophthalocyanines Using a Diode-array Detector," <i>Journal of Chromatography</i> 634: 57-64 (1993)

EXAMINER:	DATE CONSIDERED:
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.	



Notice of References Cited			09/776,599 filed 02-01-2001		
Examiner			Group Art Unit		
Epperson			1639		
U.S. PATENT DOCUMENTS					
	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,135,717	8/1992	Renzoni et al	422	81
B	4,803,170	2/1989	Stanton et al	436	518
C	4,434,236	2/1984	Freitag	436	512
D					
E					
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FOREIGN PATENT DOCUMENTS					
	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS
N					
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P					
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T					
NON-PATENT DOCUMENTS					
	DOCUMENT (including Author, Title, Source, and Pertinent Pages)				DATE
U					
V					
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1902

FORM PTO-1449		SERIAL NO.	
LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		09/776,599	
(Use several sheets if necessary)		Buechler et al.	
Fluorescence Energy Transfer and Intramolecular Energy Transfer in Particles Using Novel Compounds		FILING DATE:	GROUP:
		02-01-2001	1639

U.S. PATENT DOCUMENTS														
EXAMINER INITIAL	DOCUMENT NUMBER								DATE	NAME	CLASS	SUB CLASS	FILING DATE	
	AA	5	3	2	6	6	9	2	07/05/94	Brinkley, et al.	435	6	05/13/92	
	AB	4	1	6	8	1	0	5	08/28/79	Hirschfeld	424	8	12/20/74	
	AC	4	1	9	9	5	5	9	04/22/80	Ullman et al	424	8	02/07/77	
	AD	4	7	7	7	1	2	8	10/11/88	Lippa	435	5	05/27/88	
	AE	5	1	5	4	8	8	7	10/13/92	Bobb	422	56	05/28/91	
	AF	5	1	5	7	4	1	2	10/20/92	Klenschmidt et al	446	1.1	05/22/90	
	AG	5	1	9	4	3	9	3	03/16/93	Hugl et al	436	525	11/08/90	
	AH	5	1	2	3	7	3	1	06/23/92	Yoshinaga et al	356	73	05/13/91	
	AI	5	1	1	6	9	8	9	05/26/92	Hale et al	546	265	05/30/89	
	AJ	5	0	5	5	4	1	4	10/08/91	Bobb et al	436	501	07/05/88	
	AK	4	6	6	6	8	8	2	05/19/87	Chen	438	501	08/14/84	
	AL	4	5	4	2	1	0	4	09/17/85	Stryer et al	436	536	04/06/83	
	AM	3	9	9	6	3	4	5	12/07/78	Ullman et al	424	12	06/30/75	
	AN	5	1	3	2	2	0	6	07/21/92	Dreyer	435	6	10/20/88	

FOREIGN PATENT DOCUMENTS														
EXAMINER INITIAL	DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
													YES	NO
	AD	0	0	7	6	6	9	5	13-04-83	EPA (Stryer et al.)	33	58		
	AP	0	0	7	5	9	8	2	08-04-83	EPA (Baronoff et al.)	33	58		
	AQ	0	4	0	7	1	9	8	09-01-91	EPA (Bosley et al)	33	58		
	AR	9	3	2	3	4	9	2	11-25-93	WO/PCT 93/23492 (Brinkley)				
	AS	8	8	0	4	7	7	7	06-30-88	WO/PCT 88/04777 (Stanton)				
	AT	0	5	9	7	3	8	9	18-05-94	EPA (Tai et al.)				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)											
	AU	Pekcan, O. et al, "Direct Energy Transfer Studies on Doped and Labelled Polymer Latex Particles" <u>Physical Review Letters</u> 61:641-644 (Aug. 1, 1988)									
	AV	Stryer, Lubert, "Fluorescent Energy Transfer As A Spectroscopic Ruler" <u>Ann. Rev. Biochem.</u> 47:319-46 (1978)									
	AW	Molecular Probes Ad entitled "Novel Fluorescent Latex Microspheres - Transfluospheres A Breakthrough in Latex Microsphere Technology (1994)"									
	AX	Wheeler, B.L. et al., "A Silicon Phthalocyanine and a Silicon Naphthalocyanine: Synthesis, Electrochemistry, and Electrogenerated Chemiluminescence," <u>J. Am. chem. Soc.</u> 106:7404-7410 (1984)									

EXAMINER:

DATE CONSIDERED:

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with citation if not in conformance and not considered. Include a copy of this form with next communication.



2402



TO SEPARATE, HOLD TOP AND BOTTOM EDGES, SNAP-APART AND DISCARD CARBON

FORM PTO-892 (REV. 2-92)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 09/776599	GROUP/PART/UNIT 1639	ATTACHMENT TO PAPER NUMBER	
NOTICE OF REFERENCES CITED				APPLICANT(S) Buechler et al.			
U.S. PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILED DATE IF APPROPRIATE	
A	5484685	01/96	TAI et al. (X)	540	452	05/91	
B	5039798	08/91	JOHNSON	540	123		
C	5473925	04/95	ARRHENIUS	540	128		
D	5425152	02/95	HAYASHIDA et al.	540	128		
E							
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FOREIGN PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SPTS. OR DWG. SPEC.
L							
M							
N							
O							
P							
Q							
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
R	(X) Only Abs & Claims of TAI is being sent. It is a prior art patent!						
S							
T							
U							
EXAMINEE				DATE			



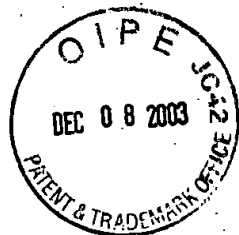
FORM PTO-1449 LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. REF. NO. 071949-2404	SERIAL NO. 09/776599
	APPLICANT: Buechler et al.	
	FILING DATE: 02-01-2001	GROUP: 1639

U.S. PATENT DOCUMENTS													
EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUB CLASS	FILING DATE
	AA	5	3	2	6	6	9	2	05/07/94	Brinkley et al.	435	6	05/13/92
	AB	4	1	6	6	1	0	5	08/28/79	Hirschfield	424	8	12/20/74
	AC	4	1	9	9	5	5	9	04/22/80	Ullman et al.	424	8	02/07/77
	AD	4	7	7	7	1	2	8	10/11/88	Lippa	435	5	05/27/86
	AE	5	1	5	4	8	8	7	10/13/92	Bobb	422	56	05/28/91
	AF	5	1	5	7	4	1	2	10/20/92	Kleinschmidt et al.	346	1.1	05/22/90
	AG	5	1	9	4	3	9	3	03/16/93	Hugh et al.	436	525	11/08/90
	AH	5	1	2	3	7	3	1	06/23/92	Yoshinaga et al.	356	73	05/13/91
	AI	5	1	1	6	9	8	9	05/26/92	Hale et al.	546	265	05/30/89
	AJ	5	0	5	5	4	1	4	10/08/91	Bobb et al.	436	501	07/05/88
	AK	4	6	6	6	8	6	2	05/19/887	Chan	436	501	08/14/84
	AL	4	5	4	2	1	0	4	09/17/85	Stryer et al.	436	536	04/06/83
	AM	3	9	9	6	3	4	5	12/07/76	Ullman et al.	424	12	06/30/75
	AN	5	1	3	2	2	0	6	07/21/92	Oreyer	435	6	10/30/88
	AO	5	0	8	9	3	9	1	02/18/92	Buechler et al.			
	AP	4	1	9	9	3	6	3	04/22/80	Chen			
	AQ	4	4	7	6	2	2	9	10/09/84	Fino et al.			
	AR	4	3	6	8	2	5	8	01/11/83	Fujimhara et al.			
	AS	5	2	4	8	7	8	2	09/28/93	Haughland et al.			
	AT	5	2	7	4	1	1	3	12/28/93	Kang et al.			
	AU	5	1	8	7	2	8	8	02/16/93	Kang et al.			
	AV	4	5	1	0	2	5	1	04/09/85	Kirkamo et al.			
	AW	4	3	2	6	0	0	8	04/20/82	Rembaum			
	AX	4	6	0	9	6	8	9	09/02/86	Schwartz et al.			
	AY	4	4	2	0	5	6	8	12/13/83	Wang et al.			

FOREIGN PATENT DOCUMENTS														
EXAMINER INITIAL		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
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	AZ		0	7	6	6	9	5	13.04.83	EPO	33	58		
	BA		0	7	5	9	8	2	06.04.83	EPO	33	58		
	BB	0	4	0	7	1	8	8	09.01.91	EPO	33	58		
	BC	9	3	2	3	4	9	2	25.11.93	WOPT				

EXAMINER:	DATE CONSIDERED:
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FORM PTO-1449  LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT  (Use several sheets if necessary)	ATTY. OR. LET. NO.	SERIAL NO.
	071949-2404	09/776599
	APPLICANT: Buechler et al.	
FILING DATE:		
02-01-2001		1639

	BD		8	8	0	4	7	7	30.06.88	WOPCT (Santon et al.)						
	BE	0	2	8	5	9	6	5	12.10.88	EPO (Albert et al.)						
	BF	9	5	0	8	7	7	2	30.03.95	WOPCT (Buechler et al.)						
	BG	9	1	1	8	0	0	7	28.11.91	WOPCT (Dandliker et al.)						
	BH	9	3	1	9	3	6	6	30.09.93	WOPCT (Devlin et al.)						
	BI	0	5	9	7	3	8	9	18.05.94	EPO (Tai et al.)						

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)																
	BJ	Cerfontain and Kort, "Electrophilic Aromatic Sulfonation with Acidic Sulfonating Reagent," <u>Int. J. Sulfur Chem.</u> , C6:123-136 (1971)														
	BK	Cerfontain and Kort, <u>Mechanistic Aspects in Aromatic Sulfonation and Desulfonation</u> , Interscience, New York, pp. 2-5, 68-79 and 121-126 (1968)														
	BL	Cook et al., "Octa-alkoxy Phthalocyanine and Naphthalocyanine Derivatives: Dyes with Q-Band Absorption in the Far Red or Near Infrared," <u>J. Chem. Soc. Perkin Trans. 1</u> , pp. 2453-2458 (1988)														
	BM	Eldred and Young, "Dichlorofumaric Acid," <u>J. Am. Chem. Soc.</u> , 75:4338-4339 (1953)														
	BN	Förster, "Zwischenmolekulare Energiewanderung und Fluoreszenz," <u>Ann. Physik</u> , 2:55-75 (1948)														
	BO	Gilbert, <u>Sulfonation and Related Reactions</u> , Interscience, New York, pp. 102-103, 306-307 and 339-383 (1965)														
	BP	Gregoriadis (editor), <u>Liposome Technology</u> , Volume III, CRC Press Inc., pg. 19 (1984)														
	BQ	Haughland et al., "Dependence of the Kinetics of Singlet-Singlet Energy Transfer on Spectral Overlap," <u>Proc. Natl. Acad. Sci. USA</u> 63:23-30 (1969)														
	BR	Haughland, "Potential Sensitive Probes," <u>Handbook of Fluorescent Probes and Research Chemicals</u> , 5th edition, Molecular Probes, Inc., pp. 156-158 (1992-1994)														
	BS	Hemmila, <u>Applications of fluorescence in immunoassays</u> , John Wiley & Sons, Inc., pp. 131-135 (1991)														
	BT	Ikeda et al., "Synthesis of Non-Symmetrically Benzo-Substituted Phthalocyanines and Their Electronic Spectra," <u>Chemistry Letters</u> pp. 763-766 (1992)														
	BU	Kirby and Gregoriadis, "Ch. 2 - A Simple Procedure For Preparing Liposomes Capable of High Encapsulation Efficiency Under Mild Conditions," <u>Liposome Technology</u> , Volume I, Gregoriadis editor, CRC Press Inc., pp. 20-26 (1984)														
	BV	Kobayashi et al., "Synthesis, Spectroscopy, Electrochemistry and Spectroelectrochemistry of a Zinc Phthalocyanine with D <sub>3h</sub> Symmetry," <u>Chemistry Letters</u> pp. 2031-2034 (1992)														
	BW	Kobayashi et al., "Benzene or Naphthalene Ring-fused Mono-Substituted Type Tetraazaoctaphenylporphyrin Zinc Complexes," <u>Chemistry Letters</u> pp. 1567-1570 (1992)														
	BX	Kobayashi et al., "New Route to Unsymmetrical Phthalocyanine Analogues by the Use of Structurally Distorted Subphthalocyanines," <u>J. Am. Chem. Soc.</u> , 112:9640-9641 (1990)														
	BY	Kobayashi et al., "Phthalocyanines of a Novel Structure: Dinaphthotetraazaporphyrins with D <sub>3h</sub> Symmetry," <u>Inorg. Chem.</u> , 33:1735-1740 (1994)														
	BZ	Konami et al., "Electronic spectra of benzo-substituted phthalocyanines," <u>Molecular Physics</u> 80:153-160 (1993)														

EXAMINER:	DATE CONSIDERED:
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 809.02(a) through 809.02(d).	



FORM PTO-1449 LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 071949-2404	SERIAL NO. 09/776599
	APPLICANT: Buechler et al.	
	FILING DATE: 02-01-2001	GROUP: 1639

CA	Mayhew et al., "Ch. 2 - Preparation of Liposomes Entrapping Cancer Chemotherapeutic Agents for Experimental In Vivo and In Vitro Studies," <u>Liposome Technology</u> , Volume II, Gregoriadis editor, CRC Press Inc., pp. 19-31 (1984)
CB	McHugh and Gouterman, "Porphyrins XXIV. Energy, Oscillator Strength, and Zeeman Splitting Calculations (SCMO-CI) for Phthalocyanine, Porphyrins, and Related Ring Systems," <u>Theoret. Chim. Acta</u> (Berlin) 24:346-370 (1972)
CC	Mikhailenko et al., "Phthalocyanines and Related Compounds," <u>J. Org. Chem.</u> (USSR (English Translation) 8:341-343 (1972)
CD	Molecular Probes Ad entitled "Novel Fluorescent Latex Microspheres - Transfluospheres a Breakthrough in Latex Microsphere Technology" (1994)
CE	Pariser et al., "A Semi-Empirical Theory of the Electronic Spectra and Electronic Structure of Complex Unsaturated Molecules. II," <u>J. Chem. Phys.</u> 21:767-776 (1953)
CF	Pekcan et al., "Energy-Transfer Studies on Doped and Labeled Polymer Latex Particles," <u>Physical Review Letters</u> 61:641-644 (1988)
CG	Pople, "Electron Interaction in Unsaturated Hydrocarbons," <u>Trans. Faraday Soc.</u> 49:1375-1385 (1953)
CH	Stryer, "Fluorescence Energy Transfer as a Spectroscopic Ruler," <u>Annual Review of Biochemistry</u> 47:819-846 (1978)
CI	Van Arman et al., "General Fluorescence Assay for Enzyme-Catalyzed Polyanion Hydrolysis Based on Template-Directed Excimer Formation. Application to Heparin and Polyglutamate," <u>J. Am. Chem. Soc.</u> 112:5376-5377 (1990)
CJ	Wheeler et al., "A Silicon Phthalocyanine and Silicon Naphthalocyanine: Synthesis, Electrochemistry and Electrogenerated Chemiluminescence," <u>J. Am. Chem. Soc.</u> 106:7404-7410 (1984)

EXAMINER:	DATE CONSIDERED:
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 400. Note: Ex. 1000	